WHAT IS CLAIMED IS:

1.   A data processing system for processing data via a plurality of processing blocks, comprising:

a plurality of block control circuits provided corresponding to said respective

5   processing blocks,

said block control circuits controlling corresponding processing blocks by a clock synchronization respectively and transferring a handshaking control signal with other block control circuits, thereby controlling a data transfer between said processing blocks by self-synchronization type handshaking.

10   2.   The data processing system according to claim 1, wherein each said processing block has a plurality of subblocks and said data are processed via said plurality of subblocks,

at least one of said plurality of subblocks outputs a complete signal indicating that a data processing is completed, and

15   each of said plurality of block control circuits has:

an end detecting section for detecting an end of a data processing in a corresponding one of said processing blocks upon receipt of said complete signal output from said at least one of said plurality of subblocks; and

a transfer control section for receiving a detection result signal output

20   from said end detecting section to control supply and stop of a clock for a corresponding one of said processing blocks in response to a stop signal created based on said detection result signal and for transferring said handshaking control signal to control a data transfer between said plurality of processing blocks by self-synchronization type handshaking.

3.   The data processing system according to claim 1, wherein said data processing

25   system further includes an arbitration circuit for interfacing with an external system,

said arbitration circuit transferring a system control signal synchronous with a clock with said external system, thereby creating said handshaking control signal based on said system control signal.

4. The data processing system according to claim 2, wherein any of said plurality of subblocks which outputs said complete signal has gate means for controlling said supply and stop of said clock given thereto based on said complete signal output therefrom.

5. The data processing system according to claim 2, wherein each of said plurality of processing blocks includes a switch inserted through a power supply line, said switch being ON/OFF controlled based on said stop signal.

6. The data processing system according to claim 2, wherein each of said plurality of processing blocks includes a switch inserted through a ground line, said switch being ON/OFF controlled based on said stop signal.

7. The data processing system according to claim 1, wherein each said processing block has a plurality of subblocks and said data are processed via said plurality of subblocks,

at least one of said plurality of subblocks outputs a complete signal indicating that a data processing is completed,

each of said plurality of block control circuits has:

an end detecting section for detecting an end of a data processing in a corresponding one of said processing blocks upon receipt of said complete signal output from said at least one of said plurality of subblocks; and

a transfer control section for receiving a detection result signal output from said end detecting section to create a stop signal based on said detection result signal and for transferring said handshaking control signal to control a data transfer between said

plurality of processing blocks by self-synchronization type handshaking, and

each of said plurality of processing blocks includes a switch inserted through a power supply line, said switch being ON/OFF controlled based on said stop signal.

8.   The data processing system according to claim 7, wherein each of said plurality

5   of processing blocks further includes a signal fixing section being connected to said subblock for outputting said complete signal, receiving said complete signal and said stop signal, and fixing an electric potential of said complete signal to a predetermined electric potential when bringing said switch into an OFF state.

9.   The data processing system according to claim 1, wherein each said processing

10   block has a plurality of subblocks and said data are processed via said plurality of subblocks,

at least one of said plurality of subblocks outputs a complete signal indicating that a data processing is completed,

each of said plurality of block control circuits has:

15   an end detecting section for detecting an end of a data processing in a corresponding one of said processing blocks upon receipt of said complete signal output from said at least one of said plurality of subblocks; and

a transfer control section for receiving a detection result signal output from said end detecting section to create a stop signal based on said detection result signal

20   and for transferring said handshaking control signal to control a data transfer between said plurality of processing blocks by self-synchronization type handshaking, and

each of said plurality of processing blocks includes a switch inserted through a ground line, said switch being ON/OFF controlled based on said stop signal.

10.   The data processing system according to claim 9, wherein each of said plurality

25   of processing blocks further includes a signal fixing section being connected to said

subblock for outputting said complete signal, receiving said complete signal and said stop signal, and fixing an electric potential of said complete signal to a predetermined electric potential when bringing said switch into an OFF state.